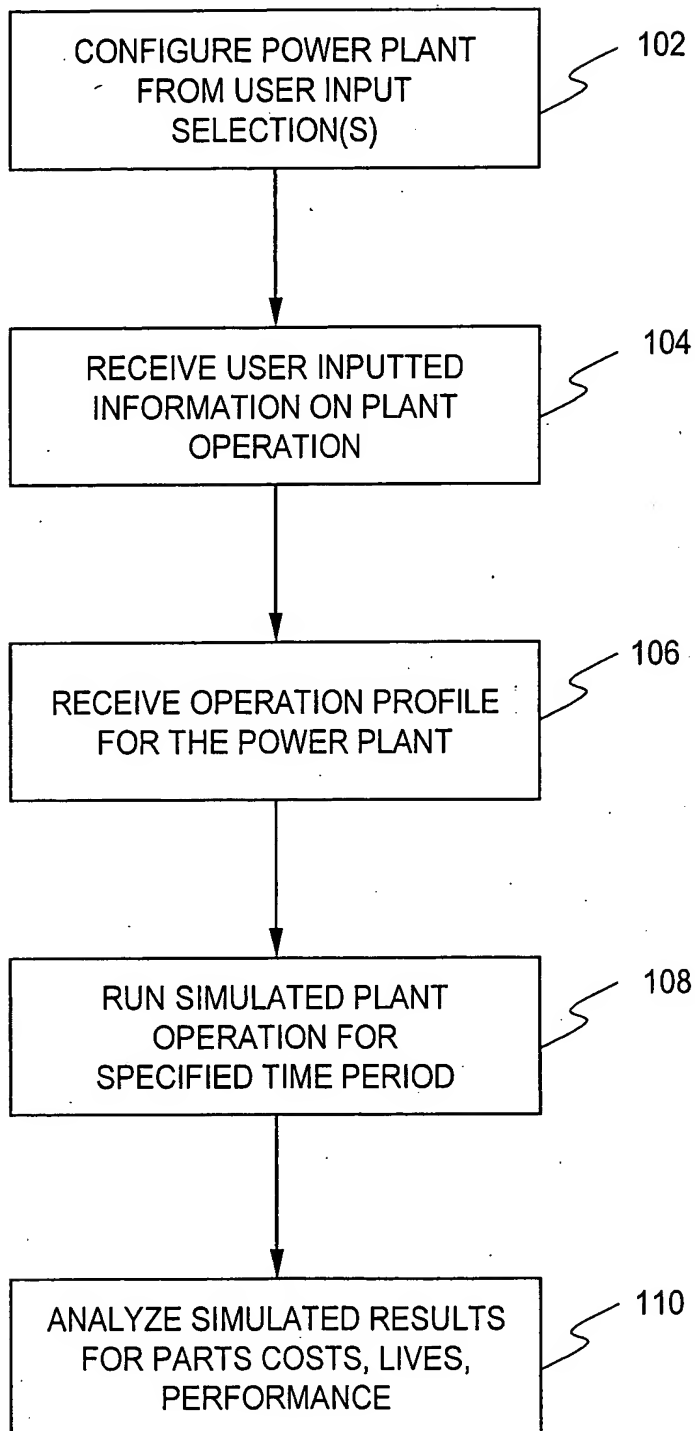




FIG. 1

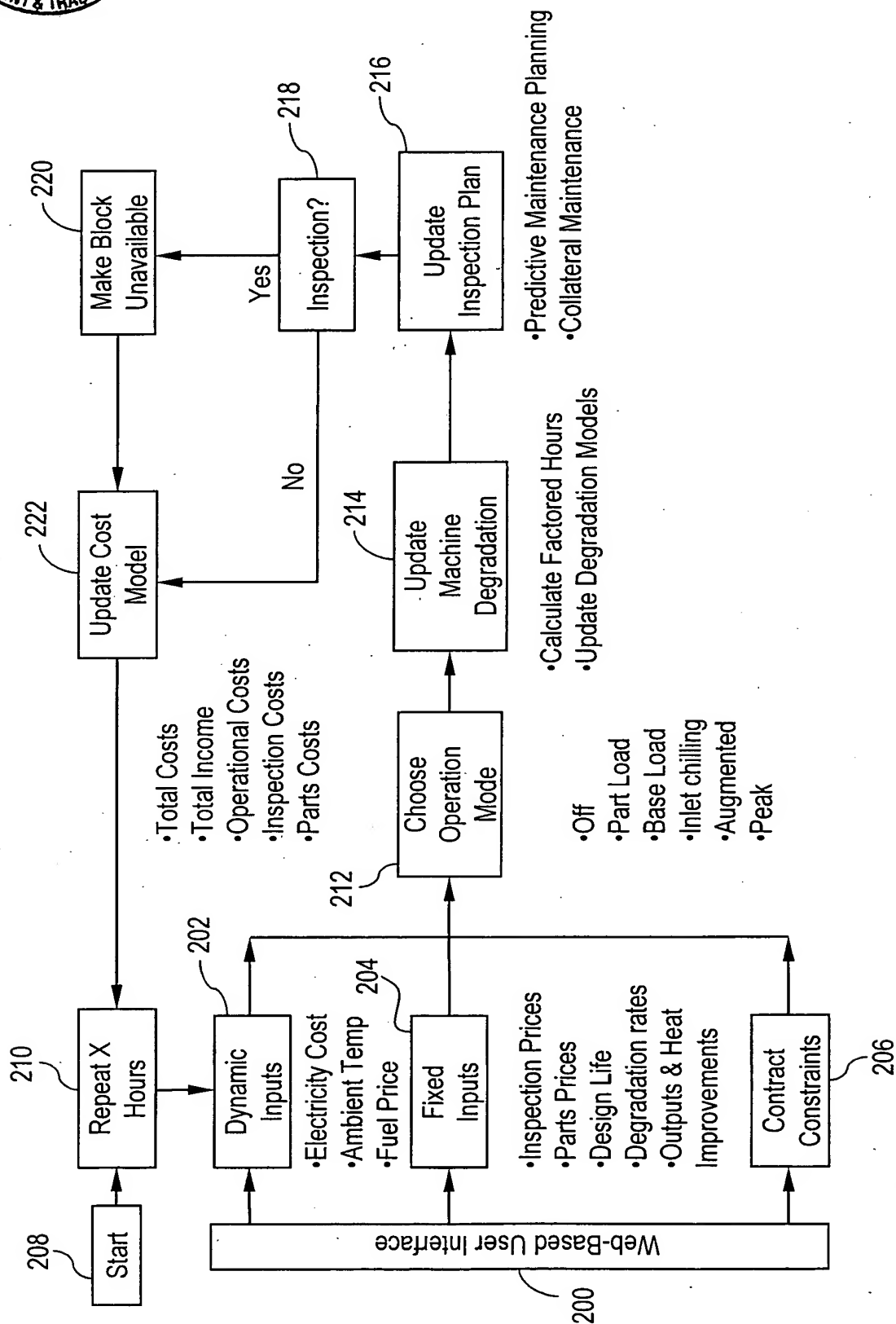
100





2/10

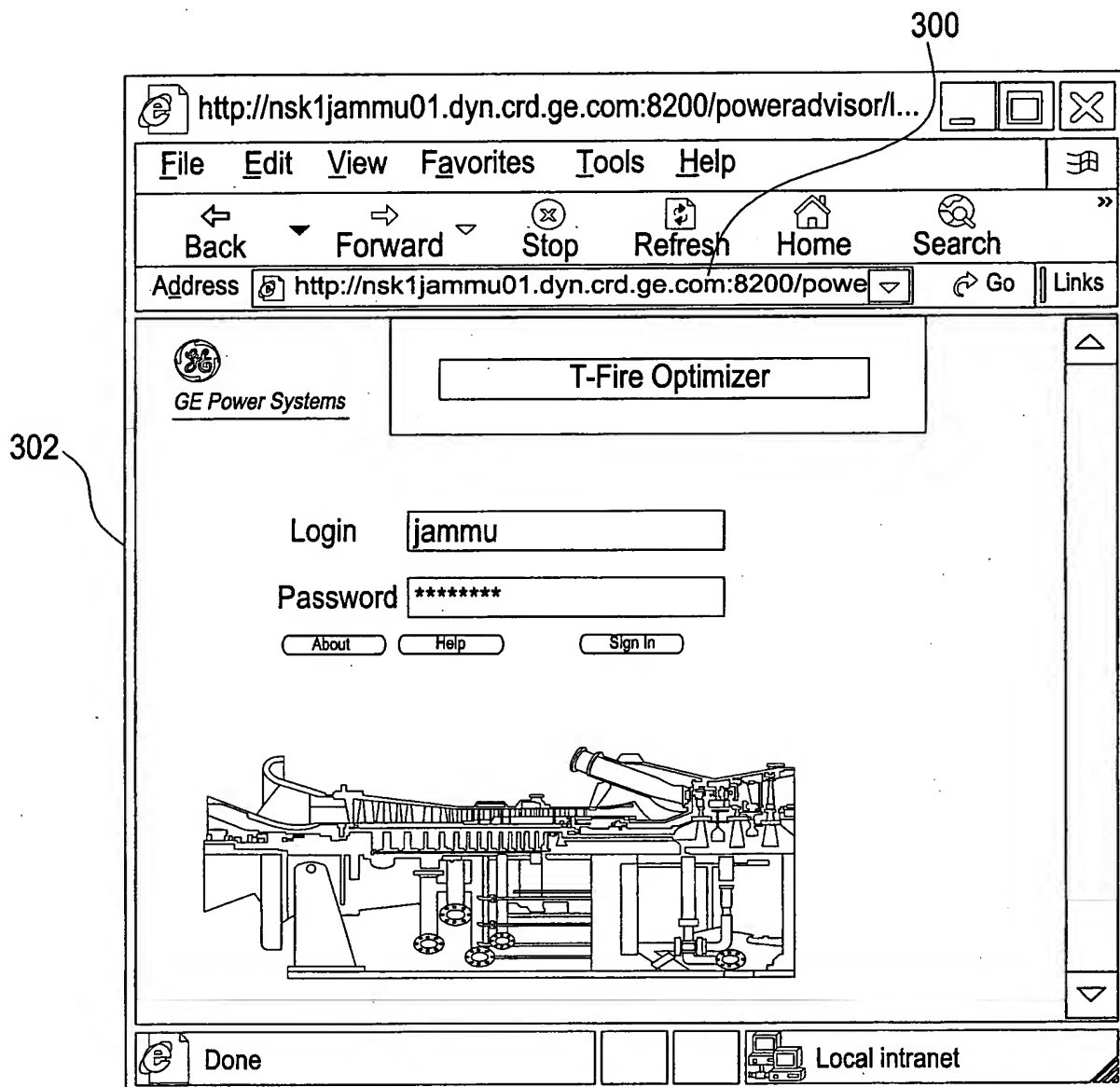
FIG. 2





3/10

FIG. 3





4/10

FIG. 4

GE Power Systems - Welcome To T-Fire Optimizer - Microsoft Internet Explorer provided by IMS...

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail

Address http://nsh1jammu01.dyn.crd.ge.com:8200/poweradvisor/home.jsp Go Links

GE Power Systems T-Fire Optimizer

Go to gepower.com

Key Word Search

Welcome, Vinay Jammu Logout

402

Home Plant Perf. Curves Profiles Inspections Constraints Financials Run Results

404

Welcome to T-Fire Optimizer

408

Configure New Plant

Based on:

☒ Standard 2x9FA ☐ Selkirk

☐ Standard 2x7FA ☐ Waterford

☐ Standard 2x7EA ☐ West Georgia

☐ 9FA Single Shaft ☐ CAPCO

☐ 7FA Single Shaft ☐ PEPCO

OR

Your Previous Plants:

406

Select Plant

Configure

Select And Run Scenario Set

Default\_Scenario\_Set

Run Edit

OR

Create New Scenario Set With Name:

CreateNew

406

400

T-Fire Optimizer News

4/10/01 New uprate models from uprate database loaded into T-Fire Optimizer. (more...)

3/26/01 Integration with COSMOS complete. (more...)

2/5/01 New plants model from Japan added to T-Fire Optimizer (more...)

GE Home

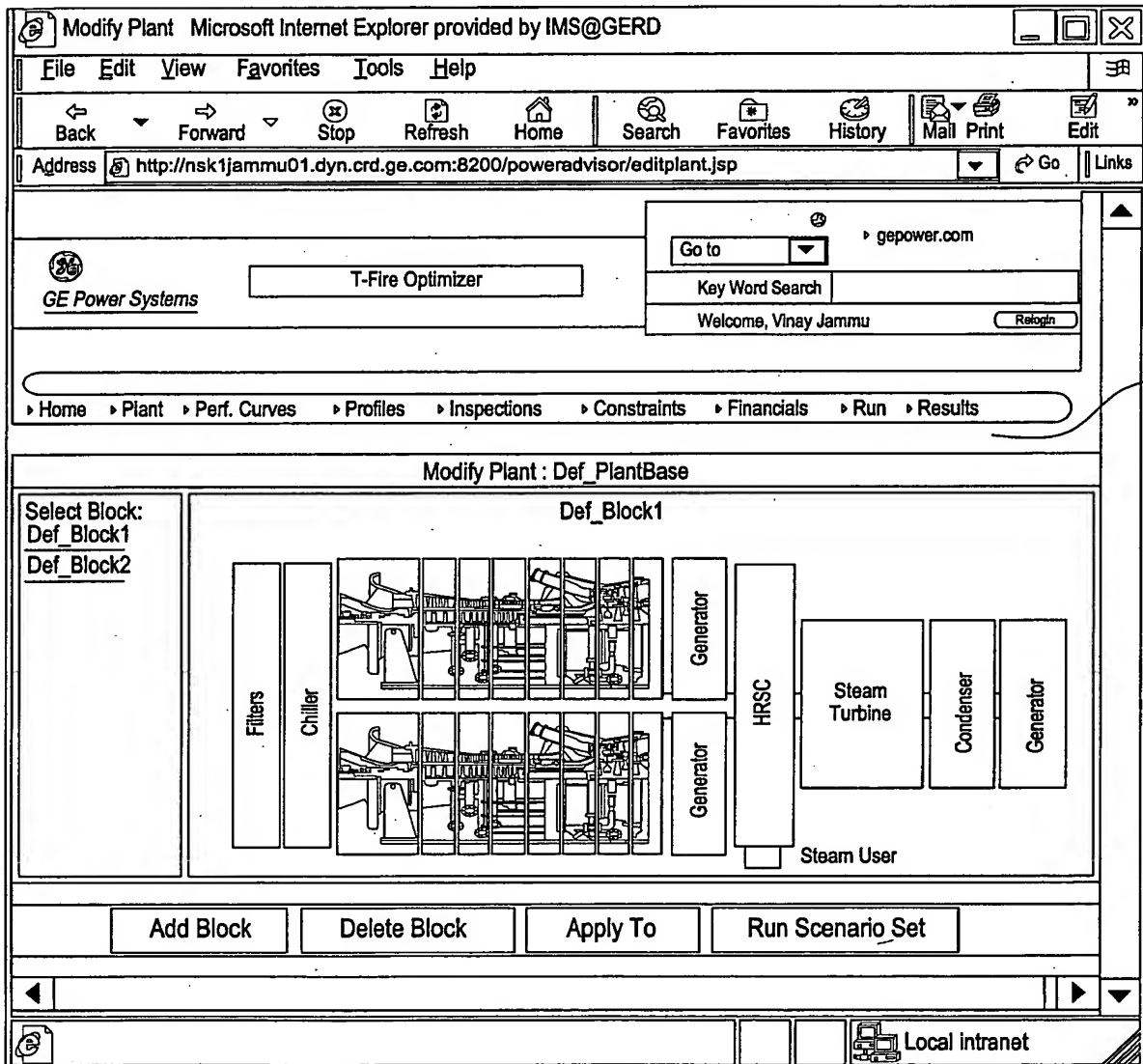
© 2001 General Electric Company. All rights reserved.

Local intranet

5/10



FIG. 5



6/10



FIG. 6

GE Power Systems - Welcome To Power Advisor - Microsoft Internet Explorer provided by IMS...

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail

Address http://nsk1jammu01.dyn.crf.ge.com:8200/poweradvisor/editscenario.jsp?ScenarioN

Go to gepower.com

Key Word Search

Welcome, Vinay Jammu

Home Plant Perf. Curves Profiles Inspections Constraints Financials Run Results

Edit Scenario: DEF\_SCENARIO

Plant		Operational Rules	
Plant	Def_PlantBase	Operational Rules	Def_PlantOp

Inspections		Constraints	
Inspection	Extended Inspection	Constraints	Constraint set 1

External Condition Profiles		Performance Curves	
Ambient Temperature	Hot Summer Profile	Chiller Curves	Special chiller 1
Electricity Price	High Summer Prices	NOx Curves	Low NOx curves
Fuel Price	Normal Fuel Price	Condenser Curves	Condensor 1

Save Save As Go to Run Screen Run Scenario Set

Done Local intranet

600



7/10

FIG. 7

Muddy Turbine - Microsoft Internet Explorer provided by IMS@GECRD

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail

Address <http://nsk1jammu01.dyn.crf.ge.com:8200/poweradvisor/home.jsp> Go Links

GE Power Systems T-Fire Optimizer

Go to [gepower.com](http://gepower.com)

Key Word Search

Welcome, Vinay Jammu [Logout](#)

Home Plant Perf. Curves Profiles Inspections Constraints Financials Run Results

Compressor: Def_Compressor			
Parts		Cost	
Units/Set	1	Cost Price (\$)/Set	500000.0
Fallout (%)	0	Repair Price (\$)/Set	100000.0
Design Life (Hrs)	14400.0		
Service Time (Hrs)	26.0		

Performance Degradation		Price	
Perf. Degradation (%)/Year	0.1	Sale Price (\$)/Set	1000000.0
Perf. Recovered (%) At Inspection	50.0	Scrap Value (\$)/Set	0.0

Uprate		Margin	
Heat Improvement	5	Repair Margin (%)	10.0
Output Improvement	10.0		

Def\_Block1  
Def\_GT1

Def\_Compressor  
Def\_Combustor  
Def\_S1Bucket  
Def\_S2Bucket  
Def\_S3Bucket  
Def\_S1Nozzle  
Def\_S2Nozzle  
Def\_S3Nozzle

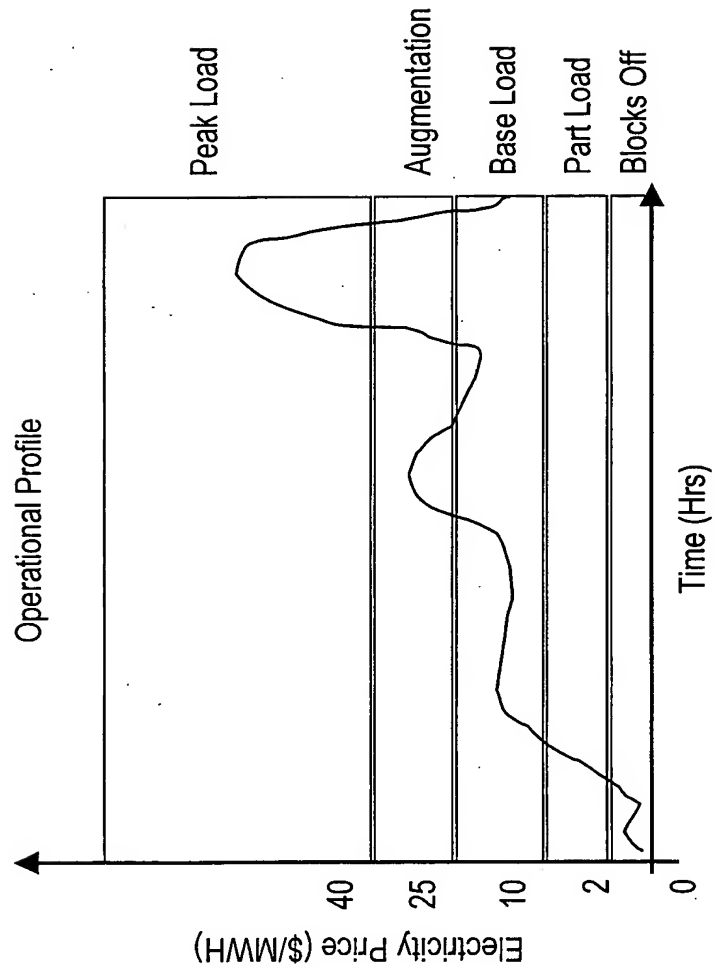
Save Run Cancel Select From Apply To

Done Local intranet

700



FIG. 8







9/10

FIG. 9

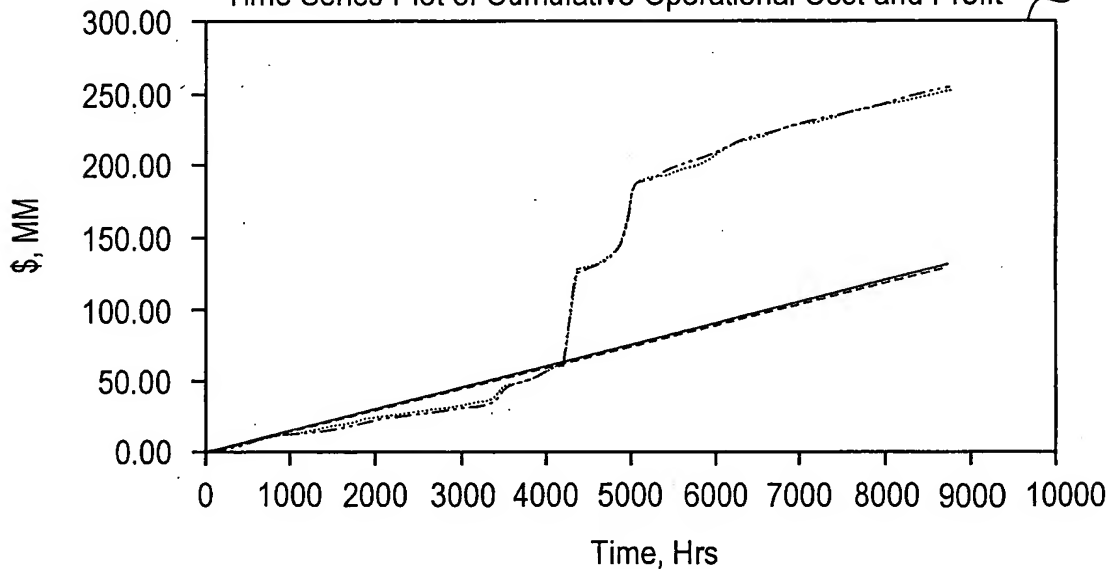
Customer Operational Cost and Profit

Customer Financials	Baseline	Improved Compressor	Difference
Customer Operation Cost (\$, MM)	130.79	130.45	-0.34
Customer Profit (\$, MM)	252.52	254.62	2.10

Constraint Violation: Max Plant Output

Plant Max Output Constraint	Baseline	Improved Compressor	Difference
Hrs of Plant Constraint Violated (Hrs)	1572.00	3294.00	1722.00
MW of Plant Output Violated (MW)	20429.56	48896.37	28466.81
\$ Lost (\$, MM)	7.89	10.51	2.62

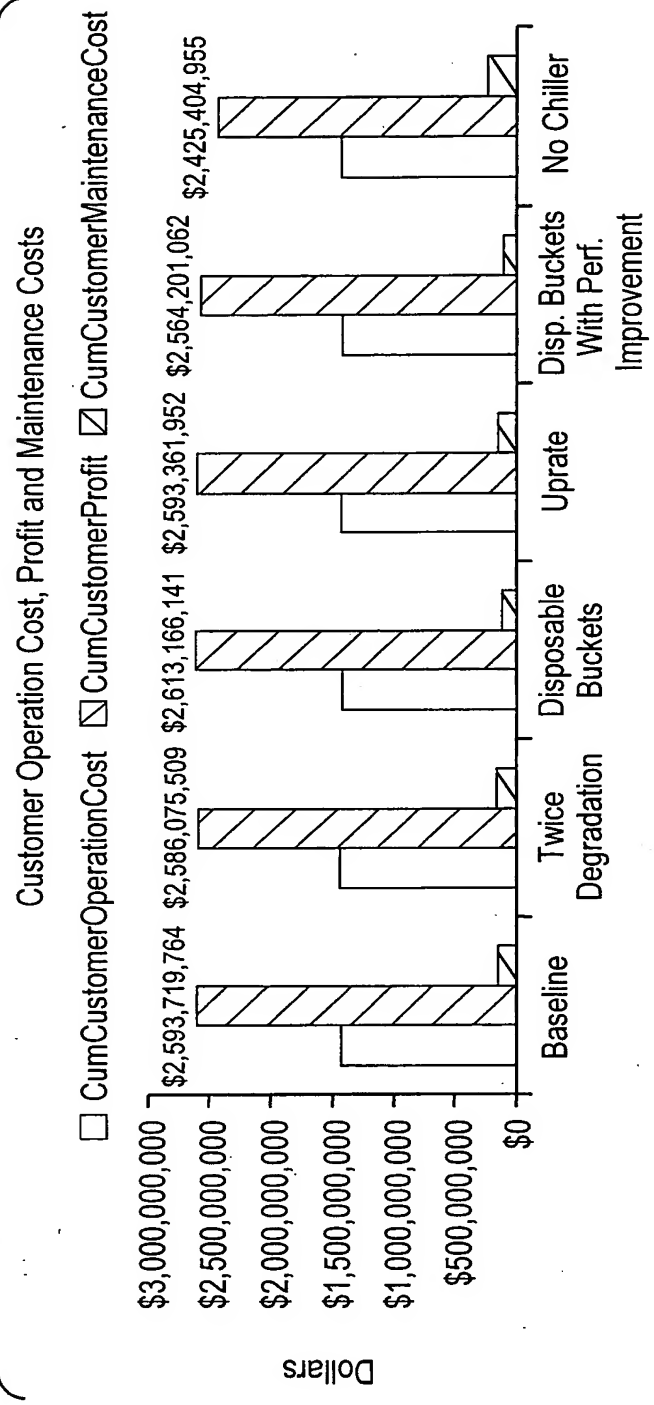
Time Series Plot of Cumulative Operational Cost and Profit



- Baseline Cost
- ..... Baseline Profit
- Improved Compressor Operations Cost
- .-.- Improved Compressor Profit



FIG. 10



Difference In Customer Total Profit (Profit-Maintenance Cost) From Base Line

